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Mankato's water—
clearly the best
choice

Leading the way...

Consume with Confidence

drinking water report

Dedicated to quality service.

Keeping an **Eagle's Eye** on the **Valley**

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You're Invited!

Plan to attend an open house to view enhancements and tour Mankato's water treatment plant.

Mankato's plant upgrade:

- helps the plant operate at maximum efficiency to be sustainable
- conserves energy and costs
- boosts water quality
- improves security
- increases capacity for future demand
- draws approximately 80 percent from surface wells instead of deep well water supply

3 p.m. to 6 p.m.
Thursday, June 23, 2011
730 Mound Avenue
Mankato, Minn.

Leading the way...

For more information call 507-387-8692
www.ci.mankato.mn.us

Register to win a Quality of Life package

The purpose of the Quality of Life package is to bring attention to the services provided by the city of Mankato and how they contribute to Mankato's quality of life:

- Utility bill (up to $50 value)
- Recycle bin
- 6-foot boulevard tree (planted as per city forester)
- 10-punch swimming pass at Mankato's Tourtellotte swimming pool
- 10 city bus tokens
- Plat map from engineering of Mankato resident's primary property
- Smoke detector check by a firefighter
- Smoke detector
- Civic center tickets (up to $50 value)
- Building permit (up to $50 value)
- Home safety check by a police officer

About the project

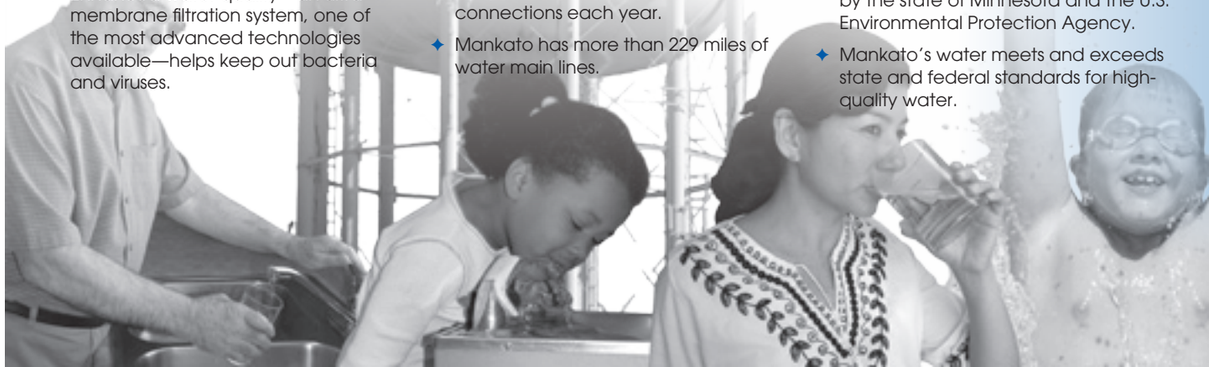
The city of Mankato is committed to providing quality water services to residents. Upgrades and improvements to Mankato's water treatment plant and other supporting projects, including the reservoirs, booster stations and wells, enhance water quality to residents and improve security at the water plant. These improvements are designed to meet the city's needs well into the future.

Benefits

- A value-added benefit includes softening—results in iron removal and corrosion stabilization that may lead to cost savings by less replacement of shower heads and faucets.
- Mankato's water treatment plant operates at maximum efficiency to be sustainable and conserve energy by drawing the majority of its water from surface wells.
- Enhanced water quality—an ultra membrane filtration system, one of the most advanced technologies available—helps keep out bacteria and viruses.
- Improved security—systems have been put in place, including a gated entry, to protect Mankato's water supply.
- Increased capacity for future demand—the ability to double treatment capacity helps ensure future water needs will be met.

Fast facts

- No major renovations had occurred on the water treatment plant for more than 35 years. This project is designed to meet future demand.
- Water drawn from shallow wells is typically softer than water drawn from deep wells. Soft water means water-using appliances will last longer, less soap and cleaning products are needed and it contributes to softer hair and skin.
- On average, more than 1.7 billon gallons of drinking water are produced for 13,487 service connections each year.
- Mankato has more than 229 miles of water main lines.
- Nine water storage facilities hold 11.45 million gallons of drinking water.
- Capacity increased from 7.5 million to 12 million gallons of water treated per day, and has the ability to expand to treat 15 million gallons of water daily.
- The 65-foot-deep wells located in the Land of Memories Park along the Minnesota River can produce up to 5,200 gallons of water per minute.
- More than 2,000 tons of lime is used at the water treatment plant annually in the softening process and is reused on agricultural land to help improve soils. This effort is sustainable and benefits the environment.
- The water treatment plant is operated 24 hours a day, seven days a week.
- Staff are trained and licensed as water plant operators by the Minnesota Department of Health.
- Mankato's water supply is approved by the state of Minnesota and the U.S. Environmental Protection Agency.
- Mankato's water meets and exceeds state and federal standards for high-quality water.



drinking water report

The city of Mankato is issuing the results of monitoring done on its drinking water from January 1 to December 31, 2010. This report helps advance the understanding of drinking water and heightens awareness of the need to protect precious water resources.

Results of monitoring

No contaminants were detected at levels that violated federal drinking water standards. However, some contaminants were detected in trace amounts that were below legal limits. The table that follows shows contaminants detected in trace amounts last year. (Some contaminants are sampled less frequently than once a year; as a result, not all contaminants were sampled for in 2010. If any of these contaminants were detected the last time they were sampled for, they are included in the table along with the date that the detection occurred.)

Contaminant (units)	MCLG	MCL	Level found		Typical source of contaminant
			Range (2010)	Average/ Result*	
Fluoride (ppm)	4	4	.97-1.1	1.08	State of Minnesota requires all municipal water systems to add fluoride to the drinking water to promote strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories.
Haloacetic acids (HAA5) (ppb)	0	60	8.5-26.5	18.06	By-product of drinking water disinfection.
Nitrate (as Nitrogen) (ppm)	10.4	10.4	nd-3.9	3.9	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Total trihalomethanes (TTHM) (ppb)	0	80	21.1-90.6	52.85	By-product of drinking water disinfection.

*This is the value used to determine compliance with federal standards. It sometimes is the highest value detected and sometimes is an average of all the detected values. If it is an average, it may contain sampling results from the previous year.

Contaminant (units)	MCLG	MCL	**	***	Typical source of contaminant
Turbidity (NTU)	N/A	TT	99.4%	.04	Soil runoff.

Turbidity is the measure of water clarity. It is monitored because it is a good indicator of the effectiveness of the filtration system.
**Lowest monthly percentage of samples meeting the turbidity limits
***Highest single measurement

Contaminant (units)	MRDLG	MRDL	****	*****	Typical source of contaminant
Chlorine (ppm)	4	4	.8-1.5	1.07	Water additive used to control microbes.

****Highest and lowest monthly averages
*****Highest quarterly average

Contaminant (units)	MCLG	AL	90% level	# sites over AL	Typical source of contaminant
Copper (ppm)	1.3	1.3	.03	0 out of 30	Corrosion of household plumbing systems; erosion of natural deposits.
Lead (ppb)	0	15	2.2	0 out of 30	Corrosion of household plumbing systems; erosion of natural deposits.

If present,elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The city of Mankato is responsible for providing high-quality drinking water, but cannot control the variety of materials used in plumbing components. When water has been sitting for several hours, one can minimize the potential for lead exposure by flushing the tap for 30 seconds to two minutes before using water for drinking or cooking. If concerned about lead in their water, residents may wish to have their water tested. Information on lead in drinking water, testing methods and steps to minimize exposure is available from the Safe Drinking Water Hotline at 1-800-426-4791 or www.epa.gov/safewater/lead.

Some contaminants do not have Maximum Contaminant Levels established for them. These unregulated contaminants are assessed using state standards known as health risk limits to determine if they pose a threat to human health. If unacceptable levels of an unregulated contaminant are found, the response is the same as if an MCL has been exceeded: water system staff must inform its customers and take other corrective actions. The unregulated contaminants that were detected are in the table that follows:

Contaminant (units)	Level found		Typical source of contaminant
	Range (2008)	Average/ Result	
Sodium (ppm) 3/19/2008	N/A	34	Erosion of natural deposits.
Sulfate (ppm) 3/19/2008	N/A	153	Erosion of natural deposits.

Key to abbreviations:

MCLG–Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MCL–Maximum Contaminant Level: The highest level of a contaminant allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

TT–Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.

NTU–Nephelometric Turbidity Unit, used to measure clarity in drinking water.

MRDL–Maximum Residual Disinfectant Level

MRDLG–Maximum Residual Disinfectant Level Goal

AL–Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirement which a water system must follow.

90th Percentile Level–This is the value obtained after disregarding 10 percent of the samples taken that had the highest levels. For example, in a situation in which 10 samples were taken, the 90th percentile level is determined by disregarding the highest result, which represents 10 percent of the samples. Note: In situations in which only five samples are taken, the average of the two with the highest levels is used to determine the 90th percentile level.

ppm–Parts per million, which can also be expressed as milligrams per liter (mg/l).

ppb–Parts per billion, which can also be expressed as micrograms per liter (µg/l).

nd–No detection.

N/A–Not applicable (does not apply).

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Compliance with National Primary Drinking Water Regulations

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animal or human activity.

Contaminants that may be present in source water include:

- **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- **Inorganic contaminants**, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban storm water runoff and residential uses.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff and septic systems.
- **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 1-800-426-4791.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The EPA/Centers for Disease Control guidelines about cryptosporidium (and appropriate means to lessen the risk of infection) are available from the Safe Drinking Water Hotline at 1-800-426-4791.

Source of water

The city of Mankato provides drinking water to its residents from a groundwater source: five wells ranging from 47 to 848 feet deep that draw water from the Multiple, Quaternary Water Table and Mt. Simon aquifers.

The water provided to customers does meet drinking water standards. The Minnesota Department of Health has also made a determination as to how vulnerable the source of water may be to future contamination incidents. To obtain the entire source water assessment regarding drinking water, please call 651-201-4700 or 1-800-818-9318 (and press 5) during normal business hours. View it online at www.health.state.mn.us/divs/eh/water/swp/swa.

Call 507-387-8522 for questions about city of Mankato drinking water or information about opportunities for public participation in decisions that may affect the water quality.

Translation assistance available

This report contains important information about drinking water. Please call the Minnesota State University, Mankato Office of Institutional Diversity at 507-389-6125 for translation assistance.

Este reporte contiene información importante acerca del agua potable. Si necesita esta información en español, por favor comuníquese con la oficina de Institucional Diversity en Minnesota State University, Mankato al 507-389-6125.

Warbixintani waxay wadataa macluumaad muhiim ah ee la xiriira biyaha aad cabtid. Fadalan soo wac telefoonka xfiiska Minnesota State University, Mankato Office of Institutional Diversity oo ah 507-389-6125 hadii add cawimadd turjubaan u baahan tahay.

Zaj xov xwm ceem ceeb hais txog txoj kev haus dej. Yog koj xav tau kev pab txhais daim ntawv nov, thov hu xov tooj tuaj rau Minnesota State University, Mankato Office of Institutional Diversity: 507-389-6125.